LAIKIPIA UNIVERSITY

COMP 226/ BICT 221: Computer Network CAT

INSTRUCTIONS

• Answer ALL questions in section

CAT ONE (20 MARKS)

a)	What	Vhat is a Computer Network? (2 Marks		
b)	Desc	ribe two ways to measure Computer Networks performance		
•	Mark	s)		
c)				
,	i.	What is Network Topology?	(2	
		Marks)	`	
	ii.	Briefly describe three types of network topologies	(3	
		Marks)	`	
d)	Describe the tole of the following devices in a computer network		(2	
	Marks)			
	i.	Router		
	ii.	Switch		
	iii.	Firewall		
	iv.	Hub		
e)	What are four difference between TCP and UDP		(4	
	Marks)			
f)	What	/hat is the Motivation behind NAT? (2 Marks		
g)	÷ • •			
	Marks)			
	i.	Static NAT		
	ii.	Dynamic NAT		
	iii.	Network Address and Port Translation (NAPT)		
	iv.	Easy IP		
	V	NAT Server		

CAT TWO (20 MARKS)

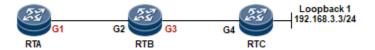
- a) Why Are Dynamic Routing Protocol Used? (2 Marks)
- b) What are two ways for Classifying Dynamic Routing Protocols and give examples (2

Marks)

 Describe the following technologies used to improve network bandwidth and reliability

(2 Marks)

- i. Intelligent stack (iStack)
- ii. Cluster switch system (CSS)
- d) Using a diagram, describe the Recommended Architecture for CSS, Eth-Trunks and iStack (2
 Marks)
- e) Outline the roles of the following OSPF packets? (2 Marks)
 - i. Hello
 - ii. Database Description
 - iii. Link State Request
 - iv. Link State DD
- f) If a packet routed by OSPF from RTA and destined for RTC's interface Loopback 1 attached to subnet 192.168.3.3/24, what is the cost (2 Marks)



- g) Outline TWO problems that might be caused by lack of standards in data communication networks
 (2 Marks)
- h) Define Static IP and Dynamic IP addressing? (2 Marks)
- i) What is the role of a DHCP in a computer networkMarks)
- j) Describe four Issues Faced by Manual Network IP Parameter Configuration (2 Marks)
- k) Describe the DHCP Working Principle clearly showing the DORA process and the IP address renewal process (2Marks)